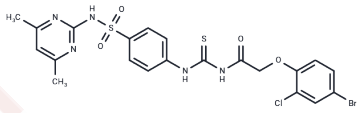
Data Sheet (Cat.No.T1855)

TargetMol

ZCL278

Chemical Properties



CAS No. : 587841-73-4

Formula: C21H19BrClN5O4S2

Molecular Weight: 584.89

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	ZCL278 is a selective Cdc42 GTPase inhibitor.
Targets(IC50)	Anti-infection,CDK,Influenza Virus,Ras
In vivo	ZCL278 reduces the JUNV RNA load in the spleen by over 33-fold, rendering JUNV RNA undetectable in 5 of 8 mice. These results mirror those observed in Gabapentin-treated mice, demonstrating ZCL278's ability to abrogate JUNV replication [2].
Kinase Assay	Lyophilized Cdc42 protein is reconstituted to 5 mg/mL in a buffer consisting of 50 mM Tris, 0.5 mM MgCl2, 50 mM NaCl, 3% (wt/vol) sucrose, and 0.6% dextran. The stock solution is then diluted to 1 μM in 5 mM phosphate buffer, pH 7.4. Into a quartz cuvettete containing Cdc42 solution, aliquots of ZCL278 are added and incubated for 5 min before each fluorescent measurement. The excitation wavelength is 275 nm, and the fluorescence of tryptophan at 350 nm is measured after each addition. The titration curve is fitted using the equimolar specific binding model in GraphPad, and the Kd is calculated[1].
Cell Research	ZCL278 is prepared in DMSO and stored, and then diluted with appropriate medium before use[1]. To determine cell viability, PC-3 cells are incubated for 24 h with or without the Cdc42 activator, ZCL278, or NSC23766. By using the trypan blue dye exclusion method, the numbers of live and dead cells are obtained with a Countess Automated Cell Counter. P values are assigned in each experiment, and any null hypothesis with probability level <95% is rejected[1].

Solubility Information

Solubility	DMSO: 125 mg/mL (213.72 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (17.1 mM),Solution. 10% DMSO+90% Saline: < 10 mg/mL (17.1 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7097 mL	8.5486 mL	17.0972 mL
5 mM	0.3419 mL	1.7097 mL	3.4194 mL
10 mM	0.171 mL	0.8549 mL	1.7097 mL
50 mM	0.0342 mL	0.171 mL	0.3419 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Friesland A, et al. Proc Natl Acad Sci U S A. 2013, 110(4), 1261-1266.
Chou YY, et al. Identification and Characterization of a Novel Broad-Spectrum Virus Entry Inhibitor. J Virol. 2016 Apr 14;90(9):4494-510.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481